## ABSTRACT OF THE DISCLOSURE

A wireless sensor incorporated bearing assembly includes a bearing including a stationary race member and a rotatable race member, a sensor unit and a sensor unit mounting device to removably mount the sensor unit on the stationary race member of the bearing. The sensor unit is of one-piece construction including a sensor section to detect a target of detection, a signal transmitting circuit and a transmitting antenna. The sensor unit includes, as an electric power supply section, a section that does not require wiring, for example, an electric power receiving section to receive an electric power wirelessly, or a battery or electric power generator.